

Attorney Docket No.: J6816(C)
Serial No.: 10/697,608
Filed: October 30, 2003
Confirmation No.: 9632

REMARKS

Applicant's attorney thanks the Examiner and her SPE for the courtesy of an Office Interview held May 2, 2007. A proposal was provided by applicant to amend claim 1. The independent claim now incorporates the elements of original claim 6 (glycerin present from about 10 to about 50%). Further, the modified starch is now specified as being a non-gelatinized type. Support is found in the specification at page 5, paragraph [00014]. Still further, claim 1 now recites the ratio of surfactant and co-surfactant as ranging between about 15:85 and 60:40. Support is found at page 17, paragraph [00051].

Comments which follow are intended to be responsive to the open Office Action and also to review some of the arguments presented during the Interview.

Claims 1-2 and 6-15 were rejected under 35 U.S.C. § 103(a) as unpatentable over Mausner et al. (US Patent 5,215,759) in view of Muller et al. (US Patent 6,248,338) and further in view of Franklin et al. (US Patent Application Publication 2001/0055574 A1). Applicant traverses this rejection.

Mausner was cited for teaching a cosmetic composition with ingredients and concentration ranges as follows: 0.01-0.8% glycerin, 4.6-9.3% of PEG-100 stearate surfactant, 0.3-2.4% of fatty alcohol, 0.05-0.15% glyceryl ester, 0.005-0.15% fatty acid and the co-surfactant total ranges from 0.35-0.15%.

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Moisturization of skin is vastly improved by incorporation of glycerin at relatively high concentration levels, particularly 10% or higher. Unfortunately, these high levels of glycerin disadvantageously impart negative skinfeel aesthetics to applied areas of the skin. High glycerin formulas also present a challenge for thickening and emulsifying the formulation.

Applicant has achieved compositions with significant glycerin content through formulation with a modified starch in combination with a specified crystalline gel structurant. The structurant comprises a surfactant and co-surfactant. The surfactant is a polyethoxy or polypropoxy alcohol ester of a fatty acid. The co-surfactant is a mixture of three materials. These are a C₁₀-C₂₂ fatty alcohol, a glyceryl ester of C₁₀-C₂₂ fatty acid, and stearic acid.

Albeit Mausner mentions glycerin, the Examiner self admits the amount maxes at 0.8% of the overall composition. This maximum amount is insufficient for effective moisturization. The present claims specify the need for at least about 10% glycerin. And such high levels of glycerin introduce the problems which the present invention seeks to solve.

Muller et al. was introduced for teaching a skin care composition comprising both glycerin and modified starch (hydroxypropyl di-starch phosphate), and a surfactant.

Applicant's claim 1 now specifies a non-gelatinized modified starch. Muller et al. is focused upon pre-gelatinized modified starches. See the Abstract and column 3 (lines 64-67) bridging to column 4 (line 1). By contrast to the present invention, Muller

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et al. teaches away from the use of the non-gelatinized starch variety. In particular, the reference states that: "It has surprisingly been found that with a cooking starch (i.e., non-gelatinized starch) modified in the same way as a starch to be used according to the invention, the desired advantages regarding rheology, skin feel and emulsion stability are not obtained even if the aqueous phase, following addition of the cooking starch, is heated for 15 minutes for a temperature above the gelatinizing temperature of the starch." (emphasis added). See column 4, lines 1-8. Several series of comparative experiments are reported in the reference to demonstrate the inferior characteristic of non-gelatinized modified starches. Note the negative examples referenced as Example 2, 5, 8, 17, 20, 23, 38, 41 and 44. Many of the negative comparative compositions with non-gelatinized starch were identified as being sandy (i.e. poor skin feel).

Applicant has overcome the issues with non-gelatinized modified starches through use of a crystalline gel structurant based on the claimed defined surfactant and co-surfactant. This also has been done in the context of a relatively high level of glycerin.

The reference was also said to teach a gel composition containing one or more monohydric or polyhydric alcohols such as glycerin. Further, the Examiner noted that glycerin would be present in a quantity of about 5 to 25% by weight. Attention was drawn to column 8, lines 1-6. A careful reading by the skilled chemist would question the broad alcohol concentration range mentioned at column 8. In particular, the lower limit of "about 5%" finds no resonance in most of the Examples containing this material. For instance, glycerin (87% active) is listed as present at no more than 3% in Examples 7-15, 19-36 and 40-42 constituting 30 formulas. Four examples list 5%

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glycerin at 87% active. This equates to a 4.35% level rendering Examples 16-18 and 47 questionably below the minimum 5% range quoted in the specification. Only the shaving foam preparations under Examples 37-39 list glycerin (87% active) at 8.730% by weight. A dental cream Example 46 supports 15% glycerin. From these Examples despite the range quoted at column 8, the skilled chemist would be led to formulate glycerin not much higher than about 3 or 4%. Under those circumstances, the amount of moisturization against skin would not be significantly effective, and would not meet the claims of the present invention.

Even the claimed 2:1 minimum ratio of glycerin to modified starch is not clearly taught in Muller. Twenty-four examples are below this minimum level while only eight examples are above. Of the eight above, six are below a ratio of 3.4:1. Anyone skilled in the art would much more likely be directed towards ratios lower than 2:1 in formulating ingredients outside the Muller reference.

A combination of Mausner et al. in view of Muller et al. and Franklin et al. would not render the instant invention obvious. Muller is the only reference which discloses modified starches. These materials are characterized as being pre-gelatinized. Multiple comparative experiments are reported showing that non-gelatinized starches are inferior to the pre-gelatinized variety. Skin feel is one of the disadvantages noted for the non-gelatinized type. Of particular note is a passage at column 4 (lines 1-8). Very clearly, Muller teaches away from the presently claimed non-gelatinized modified starches.

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Very small amounts of glycerin are formulated by Mausner et al. Maximum stated level is 0.8%. It would not at all be likely that a skilled chemist would insert massive levels of 10% or more glycerin into the primary reference. Indeed, despite the Muller generic disclosure of about 5 to 25% alcohol, the skilled chemist would more likely utilize levels substantially less than 5% found in most of the Muller examples. Moreover, the exemplified ratios of glycerin to modified starch in most of the Muller examples are also substantially less than the presently claimed 2:1 minimum ratio. For these reasons, the skilled chemist combining the teachings of the references would not obviously arrive at the presently claimed invention.

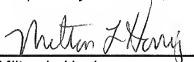
Applicant has provided a comparative experiment under Example 1 bridging pages 15-17 of the specification. Therein it is shown that a silky skin feel in the presence of a high level of glycerol is found where the surfactant/co-surfactant ratio is 20:80. The operative range by extrapolation lies between about 15:85 and 16:40. Neither Mausner et al., Muller et al. nor Franklin et al. appreciate criticality of the surfactant/co-surfactant ratio.

Franklin et al. does not remedy the deficiencies of Mausner and Muller. This reference does not disclose modified starches or the relationship between glycerin and those modified starches. Neither does the reference provide for a disclosure regarding a crystalline gel structurant with surfactant and co-surfactant.

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In view of the foregoing amendment and comments, applicant requests the Examiner to reconsider the rejection and now allow the claims.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Milton L. Honig", is written over a horizontal line.

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